7/24/03

```
Original Classifications
4 320/145
       320/160
       320/148
       320/152
       320/156
       320/110
       320/125
320/133
       320/139
       320/159
Cross-Reference Classifications
       320/160
      320/DIG 13
320/161
320/152
320/155
                                                                       me thod
       320/DIG 21
       320/139
       320/150
       320/158
       320/DIG 12
320/DIG 19
      320/106
320/132
320/159
       320/162
       320/DIG 10
       324/433
340/636.1
       340/636.15
Combined Classifications
      320/160
320/152
 11
7
  6
       320/161
      320/DIG 13
320/139
320/145
       320/155
       320/148
       320/156
      320/158
320/159
320/DIG 21
                                                       copendins : 09/738,090
12/15/2000
PS 4, 1inc 7
      320/106
320/125
320/133
       320/150
       320/DIG 12
      320/DIG 19
320/107
320/109
320/110
       320/132
       320/134
       320/136
       320/162
                                                       Page 1
```

10628609_CLS.txt

2	320/DIG 10
2	324/426
2	324/433
2	340/636.1
Ž	340/636.15
ž	455/573
۲.	733/3/3

10628609_CLSTITLES.txt

Titles of Most Frequently Occurring Classifications of Patents Returned From A Search of 10628609 on December 14, 2004

```
11 320/160
                   (4 OR, 7 XR)
                  320 : ELECTRICITY: BATTERY OR CAPACITOR CHARGING
         Class
                           OR DISCHARGING
                         BATTERY OR CELL CHARGING
         320/137
         320/160
                         .Multi-rate charging (e.g., plural charge rates
                            before a maintenance charge, etc.)
 7 320/152
                  ^{\prime}(3 OR, 4 XR)
         Class
                  320 :
                        ELECTRICITY: BATTERY OR CAPACITOR CHARGING
                           OR DISCHARGING
         320/137
                         BATTERY OR CELL CHARGING
         320/150
                         .With thermal condition detection
         320/152
                         ..Detection of current or voltage amplitude
                  (1 OR, 5 XR)
320 : ELECTRICITY: BATTERY OR CAPACITOR CHARGING
   320/161
         class
                           OR DISCHARGING
         320/137
                         BATTERY OR CELL CHARGING
         320/161
                         .With detection of current or voltage
                            differential (e.g., slope, etc.)
   320/DIG 13
                   (0 \text{ OR}, 6 \text{ XR})
                  320 : ELECTRICITY: BATTERY OR CAPACITOR CHARGING
         Class
                           OR DISCHARGING
         320/DIG 13
                        FAULT DETECTION
                   (2 OR, 3 XR)
   320/139
                  320 : ELECTRICITY: BATTERY OR CAPACITOR CHARGING
         Class
                          OR DISCHARGING
          320/137
                         BATTERY OR CELL CHARGING
         320/\bar{139}
                         .Pulsed
                   (4 OR, 1 XR)
   320/145
                  320 : ELECTRICITY: BATTERY OR CAPACITOR CHARGING
         Class
                           OR DISCHARGING
                         BATTERY OR CELL CHARGING
         320/137
          320/139
                         .Pulsed
          320/141
                         ...Pulse modulation
         320/145
                         ...Pulse-width modulation
    320/155
                   (1 \text{ OR}, 4 \text{ XR})
                  320 : ELECTRICITY: BATTERY OR CAPACITOR CHARGING
         Class
                           OR DISCHARGING
                         BATTERY OR CELL CHARGING
         320/137
         320/155
                         .Time control
   320/148
                   (3 OR, 1 XR)
                  320 :
                         ELECTRICITY: BATTERY OR CAPACITOR CHARGING
         class
                           OR DISCHARGING
         320/137
                         BATTERY OR CELL CHARGING
                         .With peak detection of current or voltage
  (e.g., delta-V or delta-I utilized, etc.)
         320/148
    320/156
                   (3 OR, 1 XR)
                  320 : ELECTRICITY: BATTERY OR CAPACITOR CHARGING
         Class
                           OR DISCHARGING
                         BATTERY OR CELL CHARGING
         320/137
          320/155
                         .Time control
                         ..Detection of current or voltage differential
         320/156
```

10628609_CLSTITLES.txt (e.g., slope, etc.)

```
(1 OR, 3 XR)
 320/158
                320 : ELECTRICITY: BATTERY OR CAPACITOR CHARGING
        Class
                         OR DISCHARGING
                       BATTERY OR CELL CHARGING
        320/137
        320/155
                       .Time control
                       ..Detection of current or voltage amplitude
        320/157
                       ... Having solid-state control device
        320/158
 320/159
                 (2 OR, 2 XR)
                320 : ELECTRICITY: BATTERY OR CAPACITOR CHARGING
        Class
                         OR DISCHARGING
        320/137
                       BATTERY OR CELL CHARGING
        320/155
                       .Time control
                       ..Detection of current or voltage amplitude
        320/157
                       ...Having solid-state control device
        320/158
        320/159
                       ....Detection of current and voltage amplitude
                 (0 \text{ OR}, 4 \text{ XR})
 320/DIG 21
                       ELECTRICITY: BATTERY OR CAPACITOR CHARGING
        Class
                 320 :
                         OR DISCHARGING
        320/DIG 18
                       INDICATOR OR DISPLAY
                       .State of charge of battery
        320/DIG 21
                 (1 OR, 2 XR)
 320/106
                       ELECTRICITY: BATTERY OR CAPACITOR CHARGING
                 320 :
        class
                         OR DISCHARGING
                       MEANS TO IDENTIFY CELL OR BATTERY TYPE
        320/106
                  (2 OR, 1 XR)
  320/125
3
                 320 : ELECTRICITY: BATTERY OR CAPACITOR CHARGING
        Class
                         OR DISCHARGING
                       DIVERSE CHARGING OR DISCHARGING RATES FOR
        320/125
                          PLURAL BATTERIES
                 (2 OR, 1 XR)
  320/133
        class
                        ELECTRICITY: BATTERY OR CAPACITOR CHARGING
                         OR DISCHARGING
        320/127
                       BATTERY OR CELL DISCHARGING
        320/128
                       .With charging
                       ..Cycling (e.g., discharge/charge cycle, etc.)
        320/130
                       ...Time control
        320/133
  320/150
                  (0 \text{ OR}, 3 \text{ XR})
                 320 : ELECTRICITY: BATTERY OR CAPACITOR CHARGING
        class
                         OR DISCHARGING
                       BATTERY OR CELL CHARGING
        320/137
        320/150
                       .with thermal condition detection
                  (0 OR, 3 XR)
  320/DIG 12
                        ELECTRICITY: BATTERY OR CAPACITOR CHARGING
                 320 :
        Class
                         OR DISCHARGING
                       PRECHARGING ANALYSIS (E.G., DETERMINING PRESENCE OF BATTERY, ETC.)
        320/DIG 12
                  (0 \text{ OR}, 3 \text{ XR})
  320/DIG 19
                       ELECTRICITY: BATTERY OR CAPACITOR CHARGING
                 320 :
        Class
                         OR DISCHARGING
        320/DIG 18
                       INDICATOR OR DISPLAY
                       .Charger status (e.g., voltmeter, etc.)
        320/DIG 19
```

10628609_CLSTITLES.txt

```
320/107
                  (1 OR, 1 XR)
                 320 : ELECTRICITY: BATTERY OR CAPACITOR CHARGING
        Class
                          OR DISCHARGING
                        CELL OR BATTERY CHARGER STRUCTURE
        320/107
                  (1 OR, 1 XR)
   320/109
                        ELECTRICITY: BATTERY OR CAPACITOR CHARGING
                 320 :
        class
                          OR DISCHARGING
        320/107
                        CELL OR BATTERY CHARGER STRUCTURE
                        .Charging station for electrically powered
        320/109
                           vehicle
                  (2 OR, 0 XR)
  320/110
        Class
                 320 :
                         ELECTRICITY:
                                        BATTERY OR CAPACITOR CHARGING
                          OR DISCHARGING
                        CELL OR BATTERY CHARGER STRUCTURE
         320/107
                        .For diverse sizes of cells, batteries, or
        320/110
                           battery packs
                  (0 OR, 2 XR)
  320/132
2
                         ELECTRICITY: BATTERY OR CAPACITOR CHARGING
        class
                 320 :
                          OR DISCHARGING
        320/127
                        BATTERY OR CELL DISCHARGING
        320/128
                        .With charging
                        ...Cycling (e.g., discharge/charge cycle, etc.)
        320/130
        320/132
                        ...With state-of-charge detection
   320/134
                  (1 \text{ OR}, 1 \text{ XR})
                        ELECTRICITY: BATTERY OR CAPACITOR CHARGING
                 320:
        Class
                          OR DISCHARGING
        320/127
320/128
320/134
                        BATTERY OR CELL DISCHARGING .With charging
                        . With battery or cell condition monitoring
                           (e.g., for protection from overcharging, heating, etc.)
                  (1 OR, 1 XR)
2 320/136
                         ELECTRICITY: BATTERY OR CAPACITOR CHARGING
        class
                          OR DISCHARGING
                        BATTERY OR CELL DISCHARGING .Regulated discharging
        320/127
320/135
                        ..With battery or cell condition monitoring
         320/136
                           (e.g., for protection from overcharging, heating, etc.)
                   (0 \text{ OR}, 2 \text{ XR})
2 320/162
                         ELECTRICITY: BATTERY OR CAPACITOR CHARGING
        class
                 320 :
                          OR DISCHARGING
                        BATTERY OR CELL CHARGING
        320/162
                        .With detection of current or voltage amplitude
2 320/DIG 10
                  (0 \text{ or}, 2 \text{ XR})
                         ELECTRICITY: BATTERY OR CAPACITOR CHARGING
                 320 :
        Class
                          OR DISCHARGING
                        NONBATTERY LOAD CONTROLS CHARGING
        320/DIG 10
   324/426
                  (1 \text{ OR}, 1 \text{ XR})
                 324:
                        ELECTRICITY: MEASURING AND TESTING
        Class
         324/425
                        ELECTROLYTE PROPERTIES
         324/426
                        .Using a battery testing device
                  (0 OR, 2 XR)
2 324/433
```

```
10628609_CLSTITLES.txt
         Class
                  324 : ELECTRICITY: MEASURING AND TESTING
         324/425
                         ELECTROLYTE PROPERTIES
                         .Using a battery testing device ..To compare battery voltage with a reference
         324/426
         324/433
                             voltage
                   (0 OR, 2 XR)
2 340/636.1
                  340 : COMMUNICATIONS: ELECTRICAL
         Class
         340/500
                         CONDITION RESPONSIVE INDICATING SYSTEM
                         .Specific condition ...Condition of electrical apparatus
         340/540
         340/635
         340/636.1
                         ...Battery
2 340/636.15
                    (0 \text{ OR}, 2 \text{ XR})
                          COMMUNICATIONS: ELECTRICAL
         Class
         340/500
340/540
                         CONDITION RESPONSIVE INDICATING SYSTEM
                         .Specific condition
                         .. Condition of electrical apparatus
         340/635
         340/636.1
340/636.15
                         ...Battery
                         ....By voltage
                  (1 OR, 1 XR)
455 : TELECOMMUNICATIONS
2 455/573
         Class
         455/73
                         TRANSMITTER AND RECEIVER AT SAME STATION (E.G.,
                                TRANSCEIVER)
         455/550.1
455/572
455/573
                         .Radiotelephone equipment detail
                         .. Power supply
                         ...Battery charging
```

PLUS Search Results for S/N 10628609, Searched December 14, 2004

The Patent Linguistics Utility System (PLUS) is a USPTO automated search system for U.S. Patents from 1971 to the present. PLUS is a query-by-example search system which produces a list of patents that are most closely related linguistically to the application searched. This search was prepared by the staff of the Scientific and Technical Information Center, SIRA.

10628609_QUAL.txt